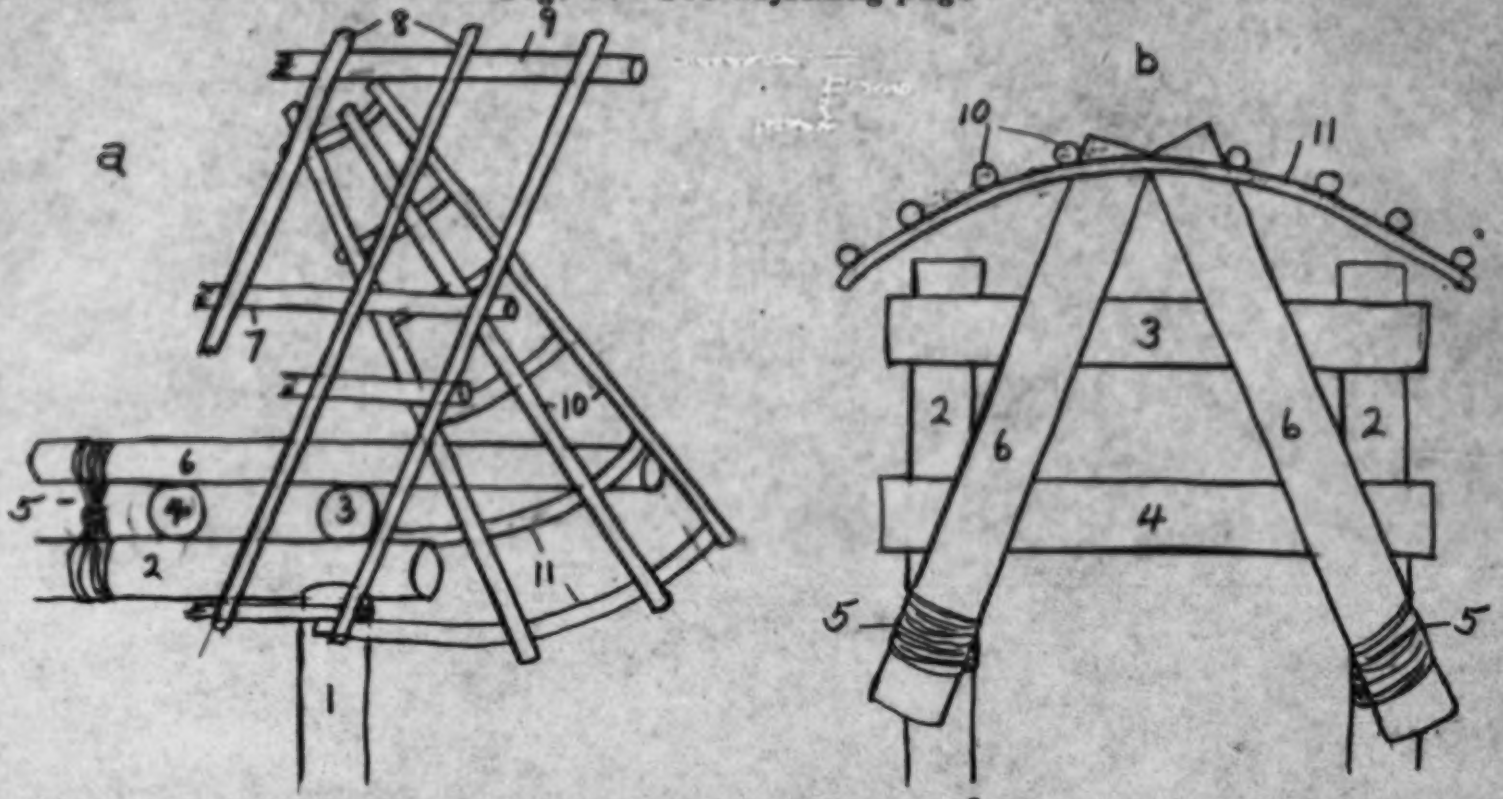
"Traditionally each of the eight main canoe-houses faces a pass. All but one of these, however, are too shallow for anything larger than a canoe. The steamer pass is on the south, between Falārik and Ellā, the larger of the uninhabited islets. Because of a few large coral heads the entrance is narrow and winding. Their removal would straighten it, and make it wide enough for large ships. In the lagoon there is ample room and depth for anchorage, sheltered during the trade-wind by the two larger islands. Outside the lagoon there is anchorage to the southwest, near the entrance to the pass, sheltered during trade-wind weather by the islet Ellā. Natives say that in a west wind ships used to anchor on the eastern side, off the channel between the two large islands. Landing there must have been difficult at any time, because the reef is steep-to and a high surf nearly always running."

Fig. 5. -See adjoining page



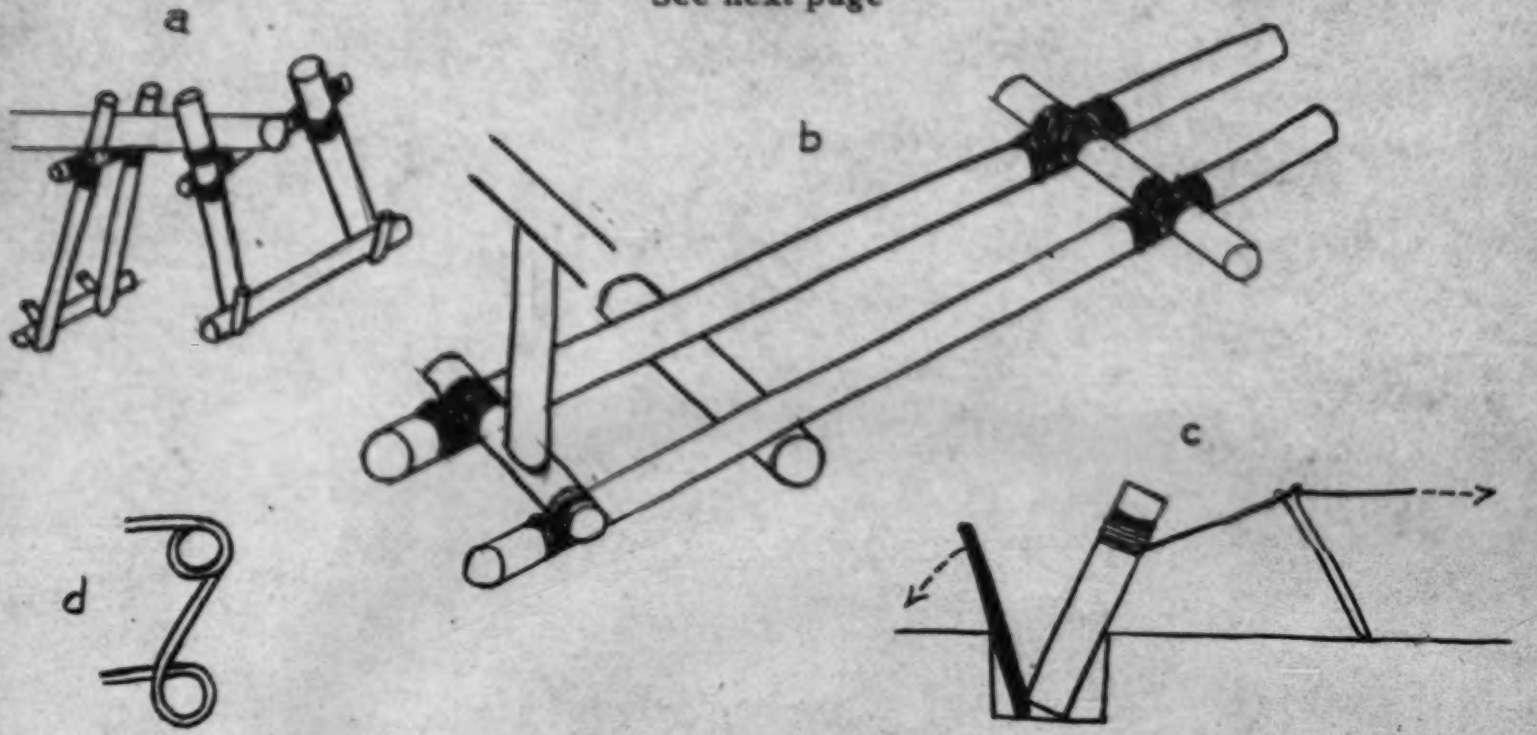
'Fig. 5. -How the projecting gable end of a canoe-house is supported without obstructing the space below, where canoes are hauled in and out.

a, side elevation. b. plan. 1, corner post; 2, stringer; 3, end tie-beam; 4, tie-beam (auten ni lalo); 5, lashing; 6, gable support (tibweli); 7, purlins; 8, rafters; 9, ridge pole; 10, gable rafters; 11, curved gable purlins."

1: Burrows--47-C (1947-48) Woleaians 1-2
116, 343, 504 Ifalik

"Fig. 7. -Techniques used in replacing corner post of a canoe-house."

See next page



1: Burrows--47-C (1947-48) Woleaians-2
116, 343, 504

"Fig. 7. -Techniques used in replacing corner post of a canoe-house.

a, temporary supports of the stringer. (The rest of the roof, supported by the stringer, is not shown).
b, double lever for raising the roof.
c, removing the old corner post by means of hauling line and levers.
d, hauling line snubbed around two trees."

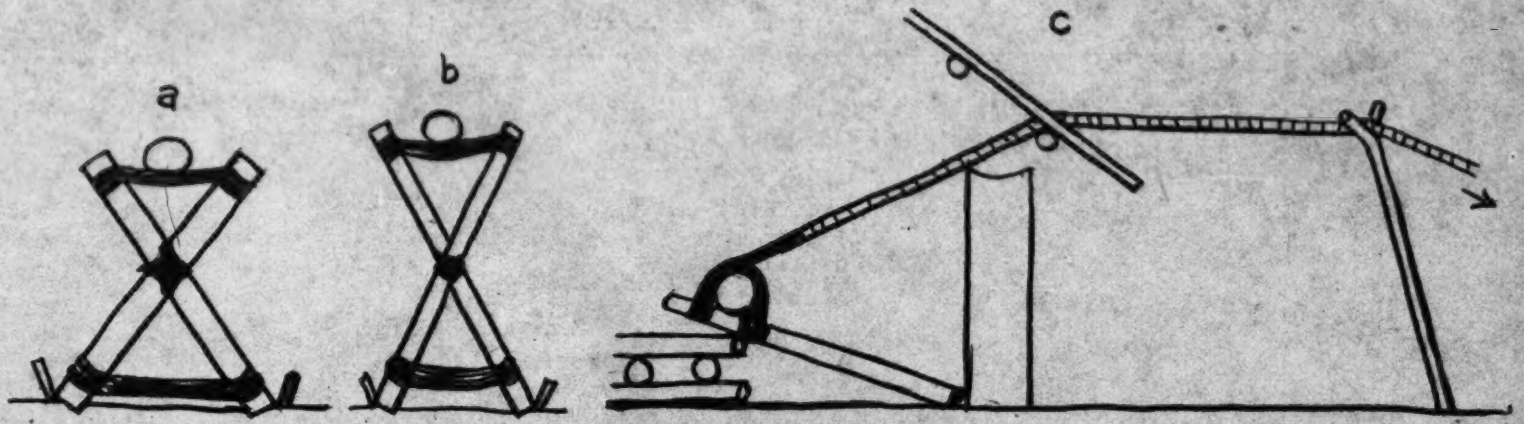
1: Burrows--51-A
116, 343, 504

(1947-48)

Woleaians
Ifalik

"Fig. 8. -Techniques used in replacing stringer of a canoe-house.

a, X-support, of light logs, sennit lashing, and pegs.
b, X-support narrowed to gain height as roof is lifted.
c, method of lifting stringer into position on top of corner post."



1: Burrows--111
116, 424, 868, 428, 504

(1947-48)

Woleaians
Ifalik

"The only property which may pass patrilineally, beside coconut trees planted on another's land, is an intangible: the lore of a navigator or master-builder. The apprentice of such a specialist is typically his son. But this property is not rigidly entailed. Tom was teaching his navigator's lore to his eldest son while we were there; but he was also teaching it to his brother-in-law, and had already finished teaching it to his brother, Magaleisei, who had won recognition as palū. As part of this property, Tom had taught these pupils or apprentices his songs for divine guidance in navigation, including the long one which was not common knowledge among navigators, but which he regarded as his own special prayer. It had come to him patrilineally, from his father, who got it in turn from his father. I failed to check on whether, in either case, he used the English word 'father' in a classificatory sense. If so, it would not change the patrilineal pattern of inheritance--if that term may be applied to what is not simply given, but taught. But the most remote transfer of this prayer which he remembered was not patrilineal. The grandfather had received it from his father-in-law. The exclusiveness or secrecy with which this lore is kept, and the fact that the owner may bequeath it at will, make it more strictly private property than any other discussed so far. Yet the voyages achieved by the skill of the navigator, and the canoes built by that of the shipwright, are used for the benefit of others as well as himself. So ownership of this lore is a trusteeship, like ownership of all kinds of property on Ifalik."

fanüuá is the boat house. Externally it is like the dwelling house, except that it is open on all sides, and has larger dimensions. (see drawing 157). The canoe houses are erected by the various parts of the villages, and belong to them. Before the last great typhoon the number of canoe houses was considerably larger than it was in 1909. The division of the canoe houses was as follows:

Part of the village:	in 1909:	Number of canoe houses before the typhoon:
Gajudőllin	1	1
Ledjőurőu	1	1
Lawuáu	1	1
Jiwán	1	3
Jór	1	3
Ságo	0	1
Sawőlöb	0	1

Ságo and Sawőlöb do not have any more canoe houses; the natives in the former part bring their boats to Gajudőllin and Ledjőurőu, while the men in the latter shelter theirs in Lawuáu.

2: Damm et al.--136 (1909) 1938 Woleaians
504 Aurupik

fanuá: canoe-house; it is open on all sides; the poles support a heavy roof. The canoe-houses are the abode of the men, for there are no real men's houses. They also sleep here very frequently, when they do not want to be with their wives. However, there were also two little houses on poles on the lagoon side; these also served as sleeping huts, and they were set on poles as a protection against the mosquitoes.

4: Krämer--84-86
116, 342, 504, 531

(1909) 1937

Woleaians
Elato

On Elato there may be a semi-conical roof so that the gable slopes; here the lower part of the house, the wall, is made of coconut mats (Figure 12a [VMM: see source]). Sometimes coconut fronds are hung directly from the ridge, and their stalks are pointed up.

Such semi-conical, sloping roofs may also be observed on the canoe-houses (Figure 53 [VMM: see source]) which are open all around, e.g., they do not have any walls. In this case, the lower frame beams do not exist [86], but only the upper framework is there and consists of square roughly worked beams (Plate 9c [VMM: see source]). They are often elaborately ornamented and the same is true of some of the square purline (Color Plate 2 and Plate 4a) [VMM: see source].

4: Krämer--185 (1909) 1937 Woleaians
116, 504 Woleai

Anchorage. West of Raur, large ships can drop anchor in a depth of 24 to 36 meters; here they are well protected when due attention is paid to the sandbanks in the eastern lagoon that are charted on the German Admiralty Map (Tit. XI, 403).

4: Krämer--186 (1909) 1937 Woleaians
116, 161, 504 Woleai

Two white houses are visible on the southwestern beach of Woleai, the northernmost of the islands of the group, but they cannot be seen distinctly. Two wooden landing bridges are found in the center of the southern side of the island of Marion approximately 4 cable lengths west of Woleai; the northern pier is weak. There is another pier at the southernmost tip of the island. In 1930 the population of the group numbered 539 persons.

4: Krämer--256-259 (1909) 1937 Woleaians-1-5
116, 504 Woleai

Large community houses on Oleai were the canoe-houses, faleoā, photo 13 a, b, c, [VMM: see source], which occur throughout the entire island region, and which served the men during the day. These houses numbered three or four on every island and one on Tagaulap and Mariong. The eaves almost touch the ground; gable spaces are lacking.

In addition there existed bachelor's quarters, which for short were called fal'lap, "great house" or falepai, according to Born. I saw them as late as 1907 when I passed Oleai on the way to Truk. Four months later, upon my return to Palau, they had been destroyed by the typhoon and had not been rebuilt. If my wife had not happened to paint a small water color of the southern tip of Paliau and the northern tip of Raur (Figure 80) on the occasion of our first visit with a fal'lap showing in both instances, these testimonies of western society* would have disappeared unknown. [257] These houses stood projected on stone wharves (Born) at the open inner beach and that was why they could be so sompletely destroyed by the typhoon. The picture with the house of Paliau presents the walled enclosure and many doors, two in the front gable and three in the longitudinal wall. On the occasion of the expedition's visit in 1909 I had the chief Agupelior make me

*I learned on Kapingamarangi that natives of Oleai who had drifted ashore had erected bachelors' quarters; but the building was no longer standing at the time of our visit. These islanders were also credited with the introduction of the breadfruit.

a model of such a fal'lap and the long side of the building is shown on Figure 124 [VMM: see source]. Born says that there was one falepoi on every island and two on Falalis.

The first striking feature was that the framework of the house did not rest on wooden posts, sur, but that there existed no more than four stone pillars, sur, which supported the two longitudinal frame beams called tanelap--in the same manner as on Feis. On the longitudinal beams rest the transverse beams, the gŏusam, on which stand the king posts, bŏt. The two king posts carry the roof tree, ung, which determines the size of the inner gable house. Above it lies the second upper roof tree, the ungaseg or ungnaseg, with the size of the roof itself. Finally, above it, there is a third long roof pole, sogoram (sogoramar), the roof tip of the projecting gable roof. On Figure 125, the three roof beams are shown in front view:

the first, ung, rests on the king posts or the ornamented middle rafter of the gable,
the second, ung ngaseg, is supported by the strong rafters, the vŏi.
and the third, the sogoram, is supported by the thinner outer rafters known as gat. [258]

On the vŏi rafters rest the heavy purlins which are called gapangag and the lowest marginal purlin known as gapilivoi. The small round purlins are named i fag, and the small rafters and the long purlins of the roof eaves are the bailimelug; the long rafters

and the small purlins of the gable are called langolimetalias (Figures 124 and 125).

Gable ornamentation: tēbaų.

the two lateral frames, eao, show shark's teeth, ngi le boggo.

the lower transverse framework, gapileping, shows a triangle pattern ngi sum "tridacha teeth" which are very popular on Palau V, where they are known as klivuk; but the arrangement is different.

the middle plank has black triangles, basal e vulegalei (basal bedjel his foot or tail of the bulegalei, the acanthurus fish.)

the white lozenges with a dot in the middle are called pup and thus are meant to represent the lozenge-like Baliste fish?

Thus the gable ornamentation has the fish as its leading motif.

The interior of the house, like the gable, is divided into two halves:

the half facing the water, jetab fal matalifal, is reserved for the chiefs, the tamol;

the half facing the land, the jetab fal apelifal, is used by the common people, the e aramat;

the interior is called nifal (nim)

the exterior is called lugilifal (lugilim)

Construction.

When a fal'lap is to be built, all the men bring coconut yarn from the various islands.

They place their contributions on the beach and are paid for their work with coconuts.

The women, all dressed up, come to the assembly house carrying food and perform a dance, ur.

The women of the place where the building is to stand sit in the house and do not allow any strangers to enter although they make attempts to get in from all sides. Finally they sit down outside, with the head chief, while the local chief stays inside with the women, to whom he gives coconuts. [259]

When the construction is completed, a great coconut taboo, ēvaū, is declared.

Huge quantities of coconuts are collected and piled up around the building. When the collection is over, the owner of the building invites everyone for a certain day when the house is to be dedicated.

On that day the guests come from everywhere. The women are all dressed in an elaborate fashion, with a great deal of ornamentation, and dance around the house. At the end of the festivity they give their necklaces, etc., to the departing men, after the latter have received their share of coconuts, They all sit on the ground, and the supervisor gives a speech in which he announces that payment is to be made in the form of coconuts. He adds that he hopes that no nasty talk will be heard about his men and that they will all remain in good health. When the ceremony is held on Volea, Falalis is assigned 1000 nuts. Votagai 3000, Tagaulap 1000, Mariong 500, Paliau 500, and Raur 500, After that the group breaks up.

4: Krämer--256-259 (1909) 1937 Woleaians-5
116, 504 Woleai

Stone posts: It is noteworthy that the house of the spirits on Tagaulap has stone posts like the dwellings on Feis (Figure 126) [VMM: see source]. It has been said in the discussion of the religion of the islanders that foreign influence has come in the past and undoubtedly it must be held responsible for these facts. The stone slabs used as house posts are a true characteristic of Feis.

6: Senfft--53
116, 133; 504

(no date) 1905

Woleaians
Woleai

The harbor in the southeast of the atoll is very good; the passage is large enough to admit even the largest boats. Flalap and Mariom Islands are now connected by a dune on which some plants are already growing. The channels which admit of passage by boats between Flalap and Paliau and between Paliau and Raur are now very narrow.

12: Lutke--138 (1828) 1835 Woleaians
116, 504 Woleai

On the western side of Raour [AN: Raur] Island there are four or five artificial harbors which were something new to us in the Caroline islands. A jetty of large stones extends from the shore into the water for a distance of about fifteen meters; and then rows of stones extend both right and left from the end at an angle of about 60°, so that the whole thing looks something like an anchor. There are no harbors of this type in the other islands of the group; the reason seems to be that the west winds bring most of the waves on to Raour island.

14: Born et al--567 (1907) 1907 Woleaians
116, 133, 504 Ifalik

...we succeeded in negotiating the difficult entrance into the lagoon of the atoll, which winds between large coral blocks. On the chart only an entrance for small boats is shown, and ships usually anchor outside the reef at a depth of 9 to 16 fathoms.

15: U.S. Hydrographic Office--543 1938 Woleaians
116, 131, 504 Ifalik

"Ifalik Islands (7°15'N., 144°27'E., H. O. Chart 5426), 9 miles southwest of Garnen Reef and 81 miles southward of Faraulep Islands, lie on a small atoll reef. The three largest are wooded and have coconut palms on them. Between the two southernmost of the three largest islands is a shoal passage available to small boats; it is also very narrow due to a reef immediately inside. There are two jetties on the southern part of the western shore of Ifalik Island."

15: U.S. Hydrographic Office--543-544 1938 Woleaians-1-2
116, 131, 504 Woleai

"Woleai (Anangai) Islands (east end, 7°21'N., 143°55'E., H. O. Chart 5426), 32 miles westward of Ifalik Islands, consist of several islands covered with coconut palms and other trees. The reef on which they lie forms two lagoons, open to the southward. A number of reefs and shoals are scattered throughout the lagoons. Motegosu, on the western side of the entrance to East Lagoon, is composed entirely of sand and pebbles, and cannot be made out from a distance. . . . Raur, the southeastern island, was formerly the trade center, but was devastated by a storm that took place over 15 years ago. . . [544]. . . .

Entrances. -- Raur Channel, at the southern end of East Lagoon, is about 1/4 mile wide and has depths of 6 to 12 fathoms in it.

West Channel, on the southwestern side of West Lagoon, has a 3 1/2 fathom patch in midchannel.

North Channel, on the northeastern side of West Lagoon, is about 200 yards wide and has depths of 3 to 7 fathoms.

A shoal and narrow channel, suitable only for small craft, leads into the western part of East Lagoon from northward of the atoll. The tidal currents in it are strong.

Tidal currents. -- In the southern entrance to East Lagoon the flood current sets eastward at a maximum drift of 0.5 knot, and the ebb west-northwestward at 0.3 knot. The currents turn at about high and low tide.

Anchorage. -- East Lagoon is too limited to afford anchorage for many vessels;

West Lagoon, however, is extensive and deep, but its shoal entrance is a hindrance to large vessels. Since both lagoons are open to the southward, a swell sets in during the season of south-west winds. At such times small vessels will find suitable anchorage in the northwestern part of East Lagoon. Northward of Tagaulap, about 1 mile southwest of Woleai, is a comparatively shoal area which affords good anchorage during southwest winds.

Of two wooden piers in front of the South Sea Trading Co.'s office, the southern is safe for small boats to come alongside. The northern pier and another at southern end of the island are not secure. Row boats can land inside the coral reef on the southwestern part of Utagal, where there is a sandy beach."

15: U.S. Hydrographic Office--544 1938 Woleaians
116, 131, 504 Aurupik

"Eauripik (Kama) Islands (east end 6°41'N., 143°05'E., H. O. Chart 5426), about 58 miles southwest of Woleai Islands, consist of six small islets, all except the westernmost of which have coconut palms on them. They lie on an atoll reef which is 5 1/2 miles long east and west, and which is steep-to with over 100 fathoms at a distance of 400 yards off. The reef on the southern side is generally low. The sea breaks on the northern side during southwesterly winds of force 1 to 2, but not on the southern side. At high tide small boats can land at a jetty on the southern side of Eauripik, the easternmost island."

16: Gt. Britain, H.O.--501-502 (no date) 1933
116, 131, 504

Woleaians-1-2
Woleai

"Entrance Channels.--Raur channel, leading into the southern end of East lagoon, is about 2 1/4 cables wide between the reef extending south-westward from the southern end of Raur island and the reef surrounding Motogozu islet, and has depths of from 10 to 25 fathoms (18^m3 to 45^m7) in the fairway, but the depths may be less in the approach.

[502]West channel, on the south-western side of West lagoon, close south-eastward of Falulap islet, has a 3 1/2-fathom (6^m4) patch in the fairway.

North channel, on the north-eastern side of West lagoon, between Farailes island and Jalangigereil is land, south-eastward of it, is about a cable wide between the reefs on either side, and has depths of from about 3 to 7 fathoms (5^m5 to 12^m8).

There is a passage between the reefs extending from the eastern end of Tagaulap and the southern end of Mariaon island, but it is narrow, and as the tidal streams in it are strong it is unsuitable except for small craft.

Shoals.--There are numerous shoals in West lagoon, which can best be seen on the chart. In east lagoon there is a shoal ridge, with depths of from one to 6 fathoms (1^m8 to 11^m0), situated about 8 cables south-eastward of Mariaon island. There is a 2-fathom (3^m7) patch about 2 3/4 cables south-westward of the south-western extremity of the ridge, and another 2-fathom (3^m7) patch situated 3 1/4 cables northward of the southern extremity of Raur island.

Anchorages.--Large vessels may obtain anchorage in East lagoon, in depths of from 15 to 20 fathoms (27^m4 to 36^m6), fine sand, with good shelter about 4 1/2 cables

16: Gt. Britain, H.O. --501-502 (no date) 1933 Woleaians-2
116, 131, 504 Woleai

westward of the northern part of Raur island.

Small vessels may obtain anchorage during the south-west monsoon off the south-eastern side of Mariaon island, and also off the northern side of Tagaulap island (Lat. 7° 22' N., Long. 143° 53' E.)."

16: Gt. Britain, H.O. --502 (no date) 1933 Woleaians
116, 133, 504 Ifalik

"Ifalik islands, about 30 miles eastward of Woleai island, lie on the eastern and southern part of the reef forming the atoll. Flarik and Flalap islands, on the eastern side of the atoll, are covered with coconut palms; Ella island has a few coconut palms showing above the other trees.

There is a narrow and shallow boat-passage between the reefs extending from Flalap and Ella islands. There are two piers on the western side of Flarik island, at the southern end, which can easily be reached."

16: Gt. Britain, H.O. --504 (no date) 1933 Woleaians
116, 133, 504 Lamotrek

"Lamotrek islands, about 5 miles eastward of Elato islands, consist of three wooded islets on a triangular atoll. Lamotrek islet, 107 feet (32^{m}6) high to the tops of the trees, lies at the eastern extremity of the atoll.

The passage about three-quarters of a mile southward of Pugue islet, the northernmost islet, is the widest and best of those leading into the lagoon, but during the north-east trade a heavy sea sets into the lagoon and caution is necessary. There is a passage about 2 cables wide, nearly in the middle of the southern side of the atoll; its position is difficult to detect, but it is a good passage when the north-east wind is strong. The next passage westward is about 1 1/2 cables wide; all the other passages are narrow.

Anchorage may be obtained on the western side of Lamotrek islet (Lat. 7°28'N., Long. 146° 24'E.), sheltered from north-easterly winds, but it is reported that during westerly winds the sea becomes rather rough. Landing can be made on a sandy beach on the western side of Lamotrek islet."

17: Meinicke--372
116, 504

(Prior to 1875) 1876

Woleaians
Woleai

...in Ulie and Palau they have made artificial harbors with large stone dams.

41: Bates & Abbott N-5 (1953) 1958
OR21 Woleai OR21
Ifaluk

and then pace directly toward him. Don would sight on Tony (or me on arrival) to get the direction, and I would call back the paces so that Don could draw directly on the base map.

The main trail of Falarik, which I got in the habit of calling "the broad highway," or sometimes "el camino real," ran through the coconut grove parallel to the lagoon shore, generally twenty or thirty yards in from the water. It was about two yards wide, and neatly marked on each side by a row of moss-covered coral rocks. This broad highway ran between the Fan Nap and the lagoon, and passed directly in front of five of the big canoe houses that faced the lagoon along the Falarik shore. The sixth canoe house on Falarik was away from the trail on the point of land that jutted toward Falalap. There were also two canoe houses on Falalap, one facing the lagoon, and the other facing the pass between the two islands.

The canoe houses, clearly distinguishable on the aerial photographs, were convenient reference points in mapping. They served not only for the storage of canoes, nets, lines and other gear, but also as social centers for the men of the atoll. Groups gathered there to talk, or rest, or weave nets, or carry on the never-ending job of making twine or rope from sennit, coconut fiber. A big sea-going canoe was being built in the Falepenach canoe house near the Fan Nap, during the summer of 1953. This provided me with a convenient and continuing subject for photography.

The broad highway ran for almost a mile along the lagoon shore of Falarik, extending considerably beyond the last habitation, toward the north end of the island, ending abruptly in the middle of nowhere. This northern tip of the island, beyond the end of the trail, was a wild tangle of vegetation, relatively little visited and little used. Except for this northwest tip, the whole of the lagoon margin of the island was a park-like coconut grove, kept clear of weeds or shrubs with almost no other kind of tree—only an occasional breadfruit tree near the household areas, and a few other things like the big *Barringtonia* by the Sabolap canoe house.

The entire course of the broad highway was thus through the open coconut grove. The habitations were mostly set at some distance back from the highway, near the "boondock line."